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10/591,058	12/31/2007	Tadashi Fujii	FUJII10	4631
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EXAMINER				
SLAWSKI, BRIAN R				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/591,058

**Applicant(s)**

FUJII ET AL.

**Examiner**

BRIAN R. SLAWSKI

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 March 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
4a) Of the above claim(s) 7-12, 17 and 18 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6 and 13-16 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 30 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/808)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**PROCESS FOR PRODUCING UNSTRETCHED FILM, PROCESS FOR PRODUCING  
RESIN-COATED METAL SHEET, AND APPARATUS FOR PRODUCING  
UNSTRETCHED FILM**

***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1-6 and 13-16, in the reply filed March 20, 2009, is acknowledged. Applicant argues that there is no lack of unity between Groups I-III, Groups I and II only differing in scope, and Group III being the apparatus used to carry out the method of Groups I and II; and that the subject matter shared by claims 1, 7, and 11 surpasses anything disclosed by Sato et al. (JP 08-207119), [cited by the examiner to evidence that the common technical feature of Groups I-III is known in the art and therefore is not a special technical feature]. This argument is not found persuasive, because, as evidenced by Kesagawa et al. (US 2004/0108621), discussed in greater detail in paragraph 6 below, the common subject matter shared by claims 1, 7, and 11—i.e., separately heating and melting first and second distinct thermoplastic resins, leading the second resin to both edges of an extrusion T-die, extruding both resins into a film where the second resin coexists on both sides of the first resin, and cutting off the edge portions of the film formed from the second resin—is already known in the art. Hence Groups I, II, and III fail to demonstrate any unifying special technical feature that would provide unity of invention under PCT Rule 13.2.

The requirement is still deemed proper and is therefore made FINAL. Claims 7-12, 17, and 18 are withdrawn from further consideration by the examiner as being drawn to a non-elected invention.

***Claim Objections***

2. Claim 2 is objected to for reciting, "the extrusion T-dye" (in the antepenultimate line), where this element should be identified as, "the extrusion T-die."

***Claim Rejections—35 USC §112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites, "the resin melt supply ducts," "the duct to which the thermoplastic resin is fed," "the duct to which the other thermoplastic resin is fed," and "the die lip," where these elements have not been previously identified in claim 2 or its base claim 1. Similarly, claim 3 recites, "the feed block," "the duct to which the thermoplastic resin is fed," and "the holes to be formed on both sides of the lower part of the duct," where these elements have not been previously identified in claim 3 or its base claim 1. There is insufficient antecedent basis for these recitations.

Claim 2 recites, "...thereafter these are widened through a manifold..." where it is unclear to which elements the pronoun "these" refers. In the interest of compact prosecution, "these" is interpreted here as denoting the streams of thermoplastic resin themselves.

Appropriate correction is required.

***Claim Rejections—35 USC §102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 13, and 14 are rejected under 35 U.S.C. 102(a) (or, in the event of Applicant perfecting the claim to foreign priority, under 35 U.S.C. 102(e)) as being anticipated by Kesagawa et al. (US 2004/0108621).

Regarding claim 1, Kesagawa et al. teach a process for producing an unstretched film by separately heating and melting a first thermoplastic resin A and a second thermoplastic resin B, feeding the first resin A to a central duct 32 in a feed block 13, leading the second resin B via branch ducts 34 in the feed block to both edges of the resin A, then feeding both resins through an extrusion T-die 12, which extrudes both resins onto a casting roll 14 such that the resin B coexists on both sides of the resin A, and cutting off and recycling the film's selvages formed by resin B (Abstract; Fig. 1, 2a-c, 4, 6; [0002, 0008, 0016, 0037-0039, 0044]).

Applicant cannot rely upon the foreign priority papers to overcome this rejection under 35 U.S.C. 102(a) because a translation of said priority paper (JP 2004-055684) has not been made of record in accordance with 37 CFR 1.55. See MPEP §201.15. Note, however, that even if Applicant should choose to submit a certified translation of the priority document to overcome the rejection under 35 U.S.C. 102(a), Kesagawa et al. would still be available as prior art under 35 U.S.C. 102(e), as quoted in paragraph 5 above.

Regarding claim 2, while Kesagawa et al. do not depict the source of the resins A and B, Kesagawa et al. teach that the thermoplastic resins A and B are different and are fed by separate resin melt supply ducts to the feed block 13, so that the resins A and B must inherently be heated and melted separately in different extruders and fed by the melt supply ducts connected to the extruders (Fig. 2a, 12; [0011, 0050, 0052]). Kesagawa teach feeding the molten resins to the feed block 13, which has a central duct 32 for the resin A and holes formed on both sides thereof, the holes being connected to the branch ducts 34 through which resin B is fed (Fig. 2a, 2c, 12; [0039]). The resins are subsequently widened through a manifold 28 connected to the feed block 13 and extruded through the extrusion T-die's lip 30 onto the casting roll 14 such that the resin B coexists on both sides of the resin A (Fig. 1, 2a, 2b; [0039, 0041, 0044]).

Regarding claims 3 and 13, Kesagawa et al. teach that the feed block 13 comprises a modular assembly of blocks 13A-E, including an interchangeable joining block 13D wherein the branch ducts 34 carrying the resin B converge on both sides of the central duct 32 carrying the resin A. Kesagawa et al. teach that various

configurations of the joining block 13D can be interchanged according to the differences in viscosity, feed rate, and temperature of the resins A and B, and the degree of overlap L desired between the resins A and B in the composite film (Fig. 3, 4, 12; [0019, 0039]). Kesagawa et al. depict joining parts 36 in the joining blocks in which the ducts 32, 34 produce composite films with varying degrees of overlap L between the resins A and B, and teach that films with no overlap, i.e., with straight-line boundaries between resins A and B, can also be made with appropriate joining parts 36 (Fig. 3, 4, 6, 7, 11; [0050, 0052, 0054, 0058]). The examiner points out that the commonly accepted definition of the term "rectangular" is "Having one or more right angles." (The American Heritage Dictionary of the English Language, 4th ed., defn. 2) Hence Kesagawa et al. depict ducts 32, 34 having rectangular cross-sections (Fig. 3) and teach ducts 32, 34 having cross-sections specifically in the shape of a rectangle (Fig. 6; [0050]).

Regarding claims 4 and 14, Kesagawa et al. do not explicitly describe the purpose of coextruding the second resin B at the edges of the film of resin A, then cutting off and recycling these edges. However, as acknowledged by Applicant in paragraph [0002] the instant specification, extruding films of thermoplastic resin through a T-die inherently causes the edges of the solidified film to be thicker than the center part of the film due to the nature of the highly viscous resin melt, for which reason it is common to cut off and recycle the edges of such films. Hence the edge portions formed by resin B in Kesagawa et al. must intrinsically be thicker than the center portion formed by resin A.

***Claim Rejections—35 USC §103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kesagawa et al. as applied to claims 1-4, 13, and 14 above.

Regarding claim 5, Kesagawa et al. teach that the melt flow rates (inversely proportional to viscosity) of the resins A and B should be small so as to prevent separation in the composite film, the resins preferably having a ratio of melt flow rates between 0.5 and 2 [0011], so that it would have been obvious to one of ordinary skill in the art to choose resins having viscosities differing by no more than 3000 poises at a shear rate from 20 to 500 sec<sup>-1</sup>.

9. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kesagawa et al. as applied to claims 1-4, 13, and 14 above, and further in view of Thompson (US 4,272,312).

Regarding claim 6, Kesagawa et al. teach using a colored (with titanium oxide pigment) thermoplastic resin for the central resin A and a non-pigmented thermoplastic resin for the selvage resin B [0050], but do not specifically teach a colored resin B. However, Thompson also teaches a process for making an extruded thermoplastic film by heating and melting first and second thermoplastic resins in separate extruders 12



and 14, feeding the first resin by a central duct 18 to an extrusion T-die 16, leading the second resin by a branched duct 20 to both edges of the first resin in the T-die, feeding both resins through the die to be extruded onto a casting roll 42 so that the second resin coexists on both sides of the first resin, and cutting off the film's thickened edge portions 30 formed from the second resin (Fig. 1-3; col. 3, L. 14-22, L. 27-32; col. 4, L. 26-59; col. 5, L. 10-14). Thompson teaches that the second resin can be provided with, e.g., a blue die so that the edge portion to be removed can be readily visualized (col. 5, L. 63-68; col. 6, L. 1-3). Hence it would have been obvious to one of ordinary skill in the art to provide a colored thermoplastic resin as the resin B of Kesagawa et al. in addition or alternatively to providing pigment in the resin A, in order to help visually distinguish the two resins in the extruded film and to judge where the edge portions of resin B should be cut off.

#### ***Art of Record***

10. The following prior art is made of record. Mitchell et al. (US 3,557,262) teach feeding a regenerated cellulose solution via a central duct to an extrusion die 4 and a hydroxyethylcellulose (HEC) solution via a branched duct to both sides of the extrusion die 4; coextruding both solutions through the die's film casting slit 5 so that the HEC coexists on both sides of the regenerated cellulose 12; and cutting off and recycling the HEC edge portions 13, 14 (Fig.; col. 2, L. 9-34; col. 3, L. 23-49, L. 72-75; col. 4, L. 1-4). Tsien (US 4,521,359) teach separately heating and melting a conductive thermoplastic resin and a colored insulating thermoplastic resin, the resins having matched melt flow

indices; feeding the resins by separate ducts to a coextruding T-die, where the insulating resin is led to both edges of the die; and extruding the resins through the die into a film so that the insulating resin coexists 37 on both sides of the conductive resin 33 (Abstract; Fig. 5, 5a-c; col. 2, L. 36-44; col. 5, L. 49-65; col. 6, L. 52-55, L. 62-65). Hattori (US 3,737,354) teach separately heating and melting a filler-containing colored thermoplastic resin 7 and a filler-free colored thermoplastic resin 8 in extruders 5 and 6; feeding the filled resin 7 via a central duct to an extrusion T-die 3; leading the unfilled resin 8 via branched ducts to both sides of the T-die; extruding the resins through the die into a film, where the unfilled resin 8 coexists on both sides of the filled resin 7; and cutting off and recycling the film's edge portions formed from the unfilled resin (Abstract; Fig. 1; col. 3, L. 16-27, L. 34-42, L. 51-61).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN R. SLAWSKI whose telephone number is (571)270-3855. The examiner can normally be reached on Monday to Thursday, 7:30 a.m. to 5:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino, can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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B.R.S.

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